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IN THE

Supreme Court of the United States

October Term, 1964

No. 396.

BELL HOSIERY MILLS, INC.,

Petitioner

vs.

MARVEL SPECIALTY COMPANY, INC.,

Respondent

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT AND APPENDIX

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To the Honorable, The Chief Justice of the United States and the Associate Justices of the Supreme Court of the United States:

Your petitioner respectfully prays that a writ of certiorari issue to review the judgment of the United States Court of Appeals for the Fourth Circuit reversing a final judgment of the United States District Court for the Western District of North Carolina, wherein originally the petitioner was defendant and the respondent was plaintiff.

OPINIONS BELOW

The opinion of the United States Court of Appeals for the Fourth Circuit is reported at 330 F. 2d 164 and the opinion of the District Court at 216 F. Supp. 824. Said opinions are appended hereto as appendices A and C, respectively.

JURISDICTION

This is an action for Patent Infringement. The opinion and judgment sought to be reviewed were entered by the United States Court of Appeals on April 3, 1964, and petitioner's timely petition for a rehearing was denied on May 19, 1964 [Appendix B attached hereto]. The jurisdiction of this Court is conferred by Title 28, United States Code, §1254(1).

QUESTIONS PRESENTED

This is not the ordinary Petition normally brought before this Court in patent cases. Rather, we seek here a review by this Court of a once simple and clear doctrine of patent law (the doctrine of equivalents) which has grown to permit the Judiciary to invade the province of Congress and limit free competition through the establishment of judicially created patent monopolies. Since its last mention by this Court fourteen years ago in *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 339 U. S. 605, 70 S.Ct. 854, 94 L.Ed. 1097 (1950), this doctrine has been stretched and expanded into a shapeless monster of undefinable magnitude which lurks within the four corners of every patent, only to evidence itself *after* a competitor commits himself to a course of action in reliance upon the actual claims made by an inventor and approved by the Patent Office.

We do not here question the basic philosophy behind this judicially created doctrine, but we do submit that the following questions must be resolved by this Court:

1. Is it in the best interest of the public to allow the Judiciary to extend the scope of a patent far beyond its disclosure and thereby prevent free competition?
2. Does the Constitution of the United States endow the Judiciary with power to grossly expand patent monopolies?
3. Is it the intention of the Congress to permit judicial interpretaton and application of patent claims, long after issue, in such a way as to broaden the scope of the patent monopoly far beyond anything intended by the original grant?
4. Is the governmental need to encourage progress in the arts and sciences satisfied by gross judicial expansion of patent claims to encompass simple variations of prior developments manifestly excluded by the restrictions in the patent claims presented to the Patent Office and accepted by the patentee?
5. Do the non-uniform standards which have evolved out of the diverse applications of the doctrine of equivalents by Courts throughout the land, as evidenced here, serve to promote invention while at the same time preserving free competition?

CONSTITUTIONAL PROVISIONS AND STATUTES INVOLVED

This case involves the following:

Constitution of the United States, Article I, §8, Clause 8, "[The Congress shall have power] to promote the Progress of Science and useful Arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries".

Title 35, United States Code, §112, Paragraph 2, "The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention".

STATEMENT OF THE MATTER INVOLVED

The important questions presented here are raised by the application of the doctrine of equivalents by the Court below to a patent relating to a device for mending knitted fabric.

Knitted fabrics normally are composed of one long strand of a single thread which is tied in a series of interlocking, equally sized loops by the formation of slip knots. A common occurrence in knitted fabrics (particularly ladies' sheer nylon stockings) is the occurrence of a "pulled thread" which is brought about when one of such loops is snagged and pulled out of the plane of the fabric. Since the thread forming the loops is continuous, such pulling forms a defect in the fabric by robbing yarn from neighboring loops in the same row or course to enlarge the size of the pulled loop while reducing the size of such robbed loops, all to the detriment of the appearance (and thus, the salability) of the stocking. Respondent's Brown patent in suit is directed to a particular device for use in correcting[1] such defects by returning the pulled thread to the robbed loops.

Brown was not the first to recognize that pulled thread defects were correctable by this method. Rather, it was common in the industry to correct pulled threads in this manner with a hand tool or so-called "hand needle"[2].

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[1]It is to be noted that the textile art commonly refers to this correction as "mending".

[2]Illustrated and shown at Appellant's Appendix, P. 51-56, 116 and shown here at p. 6a; also referred to as the "Hutchison device".

This hand tool consisted of a single needle mounted in an appropriate handle and was used by an operator to stroke repeatedly the knitted loops along the defective course to move the displaced (pulled) thread back into the proper loop. Brown's efforts were directed toward speeding up the operation, and to this end he developed the *Marvel* device claimed by the patent in suit.

This *Marvel* device essentially comprises a plurality of needles circularly arranged[3] around a hub which is mounted on a rotatable spindle encased in an appropriate handle. Upon being connected to a suitable power source to rotate the needles, the device is moved by an operator into stroking engagement with a "pulled thread" whereupon each of the rotating needles, one after the other, repeatedly strokes such thread to move it back into the proper loops. Unquestionably, this device was faster than the single needle hand powered device and respondent's monopoly under the Brown patent has been most lucrative.

The Brown patent [Appellant's Appendix, P. 13-19] was issued in 1951 with nine apparatus claims of varying scope and one method claim. Twelve years later, at commencement of trial, the method claim was disclaimed[4] and only apparatus Claims 1, 2, 4 and 7 are in issue here. Each of these claims in issue describes a device incorporating a **circular series** of work engaging elements.[5] The broadest claim reads:

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[3]Claimed in the Brown patent generally as a circular series of work engaging elements.

[4]35 U.S.C. §253 (1958).

[5]Claims 1 and 2: "a circular series of self sustaining work engaging elements"

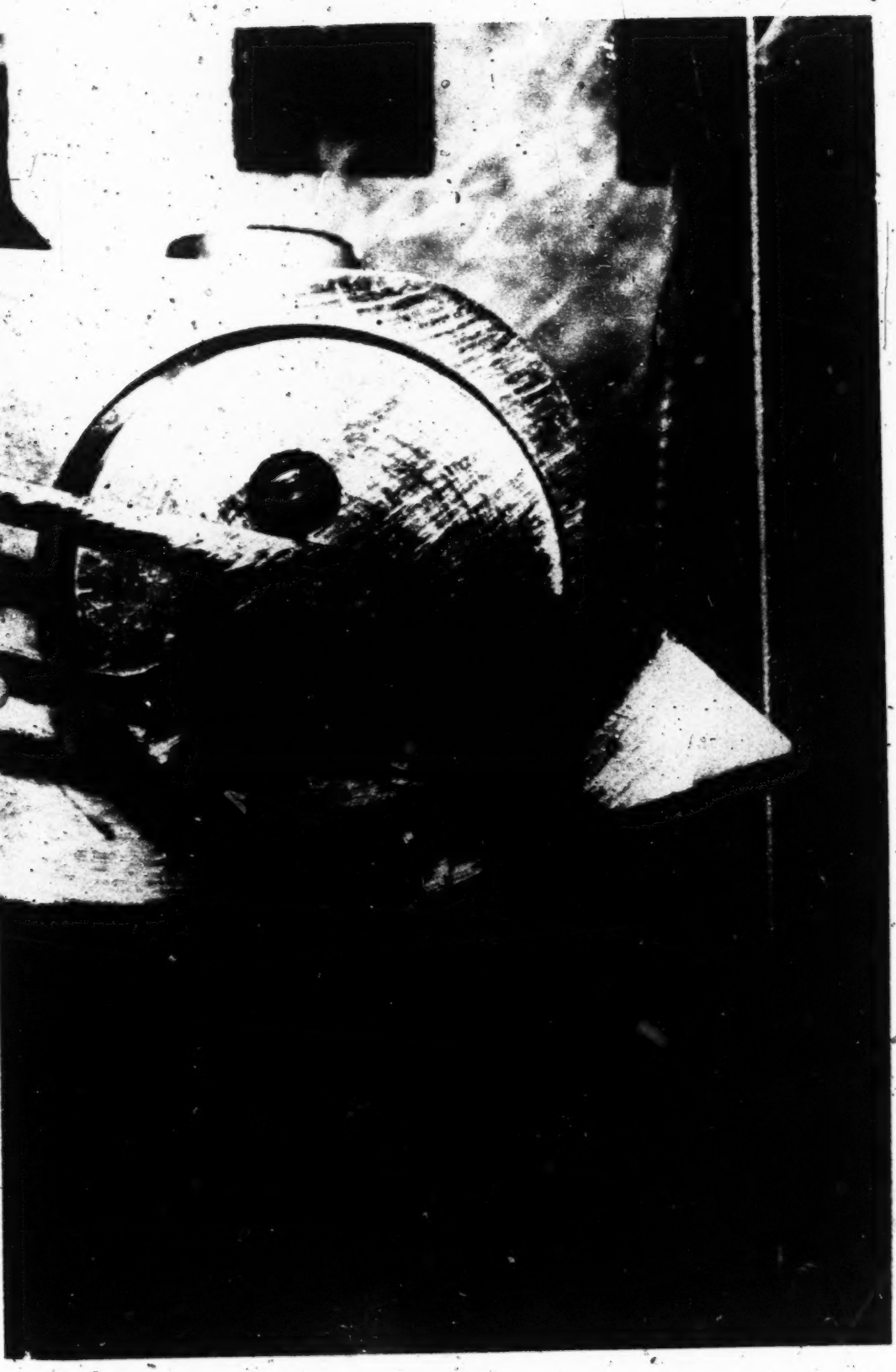
Claim 4: "a circular series of angularly spaced elements having terminal work engaging surfaces"

Claim 7: "a plurality of work engaging elements . . . arranged in a circular series"

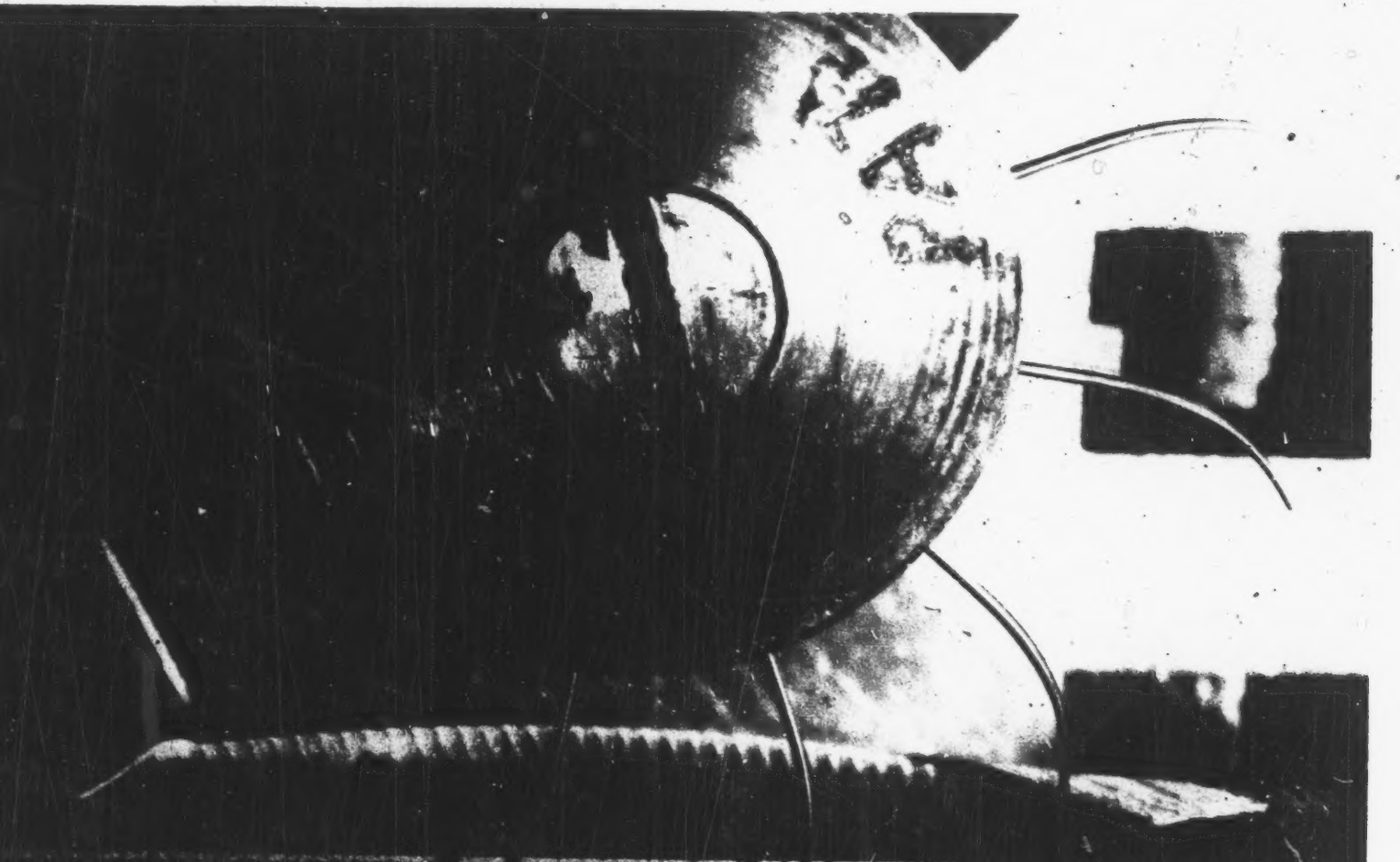
[Appellant's Appendix, P. 18]

"4. Apparatus for restoring pulled threads in knitted fabric comprising **a circular series** of angularly spaced elements having terminal work engaging surfaces of less width than the distance between two normal courses of the fabric to be restored and similarly sloped with respect to radii passing therethrough, respectively, and means supporting said elements for rotation in a plane and about the axis of said circular series."

The accused *Mend-More* device was introduced into the market by Stanford Marley Distributing Company of New York several years after the introduction of the *Marvel* device. The purchase and use of a single such *Mend-More* device by the North Carolina petitioner affords the basis for this litigation brought by the Kentucky respondent. The *Mend-More* device, like the *Marvel* device and like the prior art hand needle, is used to stroke repeatedly a pulled thread to move it back into the proper loops. To perform this function, it employs a **single blade** mounted eccentrically on a hub which is in turn attached to a rotatable shaft enclosed in a suitable handle. Unlike the circular path of travel followed during mending by the *Marvel* needles, the single *Mend-More* blade follows an elliptical path similar to that of the prior art single needle.



WN PATENT *MARVEL* DEVICE (Defendant's Exhibit 18)



Both the District Court and the Court of Appeals recognized that the *Mend-More* device is not literally covered by the Brown patent claims because of the consistent recitation therein of a circular series of work engaging elements. Based upon this fact and personal observation of all of the devices in operation, including high speed moving pictures,[6] the District Court found no infringement concluding that the doctrine of equivalents as considered by this Court in *Graver Tank*, was not applicable because "Although function and result are the same, the two devices do not operate in the same way" [216 F. Supp. 824, 828]. The Court of Appeals disagreed and found infringement via the doctrine of equivalents. It is this doctrine, as applied by the Court of Appeals, which forms the basis for this Petition.

REASONS FOR ALLOWANCE OF WRIT

I. The Subject Decision by the Court of Appeals for the Fourth Circuit Is a Classic Example of the Expansion of the Doctrine of Equivalents Far Beyond the Doctrine of *Graver Tank*.

In *Graver Tank*, this Court was faced with the limited question of infringement of four claims relating to a composition of matter for use as a welding flux. Each of such claims called for the inclusion in such composition of an alkaline earth metal silicate. The infringer substituted one silicate for another in its otherwise similar composition, using manganese silicate in lieu of an alkaline earth metal silicate (manganese is not an alkaline earth metal). In applying the doctrine of equivalents to find such substitu-

[6] The Court of Appeals observed neither the devices in operation nor the moving pictures thereof notwithstanding a specific request for it to do so [Defendant-Appellee's Petition for Rehearing, P. 8].

tion an infringement, a majority of this Court, speaking through Mr. Justice Jackson, explained the philosophy behind the doctrine:

> "But courts have also recognized that to permit imitation of a patented invention which does not copy every literal detail would be to convert the protection of the patent grant into a hollow and useless thing. Such a limitation would leave room for — indeed encourage — the unscrupulous copyist to make unimportant and insubstantial changes and substitutions in the patent which, though adding nothing, would be enough to take the copied matter outside the claim, and hence outside the reach of law. One who seeks to pirate a copyrighted book or play, may be expected to introduce minor variations to conceal and shelter the piracy. Outright and forthright duplication is a dull and very rare type of infringement. To prohibit no other would place the inventor at the mercy of verbalism and would be subordinating substance to form. It would deprive him of the benefit of his invention and would foster concealment rather than disclosure of inventions, which is one of the primary purposes of the patent system." 339 U. S. 605, 607, 70 S.Ct. 854, 856.

and then applied it to the facts of the case:

> "It is difficult to conceive of a case more appropriate for application of the doctrine of equivalents. The disclosures of the prior art made clear that manganese silicate was a useful ingredient in welding compositions. Specialists familiar with the problems of welding compositions understood that manganese was equivalent to and could be substituted for magnesium in the composition of the patented flux and their observations were confirmed by the literature of chemistry. Without some

explanation or indication that Lincolnweld was developed by independent research, the trial court could properly infer that the accused flux is the result of imitation rather than experimentation or invention. Though infringement was not literal, the changes which avoid literal infringement are colorable only. We conclude that the trial court's judgment of infringement respecting the four flux claims was proper, and we adhere to our prior decision on this aspect of the case". 339 U. S. 605, 612, 70 S.Ct. 858.

Thus, the doctrine which was created to prevent "the unscrupulous copyist . . . [from making] *unimportant* and *insubstantial* changes and substitutions" to avoid patent infringement was applied where the infringer's changes which avoided literal infringement were "colorable only".

The basis for application of doctrine, however, has been relegated into oblivion by those Courts who seek to expand the doctrine and a typical instance of this is the case below. There, the question presented was whether petitioner's accused *Mend-More* device embodying a **single** work engaging element was the equivalent of respondent's patented device embodying a **circular series** of work engaging elements. The Court felt that they were equivalent (notwithstanding the trial Court's finding to the contrary) because it felt that the two devices perform substantially the same function in substantially the same way to obtain the same result (cf. *Graver Tank*, 339 U. S. 605, 608).

The use of this criterion completely ignores the fact that both the patented *Marvel* and the accused *Mend-More* devices are used to mend "pulled threads" in exactly the same way as the prior art single needle device was used, the only difference being one of **result** — faster mending through mechanization. Moreover, it completely ignores

the fact that it is this **circular series** of needles that moves the claimed invention away from the prior **single** needle device, through the realm of ordinary mechanical skill and into the heaven of patentable inventions.

Thus, to treat as ***unimportant*** and ***insubstantial*** the substitution of the **single** work engaging element (as in the *Mend-More* device) for the circular series is to completely ignore the invention as represented to the Patent Office and to grant a patent monopoly to respondent for a **result** — the mechanized restoration of pulled threads. It has long been recognized, however, the progress of science and the useful arts will not be served by granting patent monopolies for mere results since that would prohibit all other persons from achieving such result by any means.[7]

The instant case, then, is a clear illustration of the use of the expanded doctrine of equivalents, where the test applied is not one based upon "***unimportant*** and ***insubstantial*** changes and substitutions in the patent", but one based solely upon equivalency in function, mode of operation and result without regard to the prior art or the basis upon which the patent was granted by the Patent Office.

II. The Fact That Some Courts Have Refused to Allow This Expansion of the Doctrine of Equivalents Has Given Rise to Wholesale Confusion and/or Jurisdiction Shopping in Patent Infringement Cases.

Many Courts have refused to expand the doctrine of equivalents and have kept it in its proper perspective. For example, in the next year after this Court's decision in *Graver Tank*, the Court of Appeals for the Second Circuit

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[7]See *LeRoy v. Tatham*, 14 How. 156, 14 L.Ed. 1059 (1852); *Miller v. Eagle Mfg. Co.*, 151 U. S. 186, 38 L.Ed. 121 (1893); *Risdon Iron & Locomotive Works v. Medart*, 158 U. S. 68, 39 L.Ed. 899 (1894).

considered the doctrine of equivalents in *Wabash Corp. v Ross Electric Corp.*, (C. A. 2 1951) 187 F. 2d 577; cert. den. 342 U. S. 820, 72 S.Ct. 38, 96 L.Ed. 620. There, Judge Chase speaking for the entire Court stated at Page 584:

> "Due regard must be had for what is known as the Doctrine of Equivalents to the end that *minor* omissions or *minor* changes will not serve to exonerate one who actually copies, and thus does appropriate, the gist of a patent. Cf. Graver Tank & Mfg. Co. v. Linde Air Products Co., 339 U. S. 605, 70 S. Ct. 854, 94 L.Ed. 1097; Royal Typewriter Co. v. Remington-Rand, Inc., 2 Cir., 168 F. 2d 691." [Emphasis added]

Thus, the Court of Appeals for the Second Circuit recognized that the true test of equivalency is concerned with *minor* omissions or changes.

In 1952, the original *Graver Tank* case again appeared before the Court of Appeals for the Seventh Circuit after the District Court had held the defendant in contempt for violation of its injunction against infringement. This decision is reported as *Union Carbide and Carbon Corp. v. Graver Tank & Mfg. Co., Inc., et al,* (C. A. 7 1952) 196 F. 2d 103. The issue of infringement this time was concerned with defendant's modified flux and the claim language "a major portion of" immediately preceding the recitation of alkaline earth metal silicates. Defendant contended that its new welding flux did not contain "a major portion of" any type of silicate.

Although plaintiff urged that the Supreme Court's *Graver Tank* decision was controlling, the Court of Appeals reversed the District Court and held that a composition which did not have "a major portion of" any type of silicate was not an equivalent and not an infringement.

The Court's decision was based upon an examination of the claims in the light of the patent specification as it was originally presented to the Patent Office:

> "In our opinion, the application of the doctrine of equivalency in this case is to ignore the teachings of the patent, the representation upon which the claims in suit were allowed and, more pointedly perhaps, the representations by which their validity has been sustained in the courts." 196 F. 2d 103, 112.

This Court denied certiorari, 343 U. S. 967, 72 S.Ct. 1059, 96 L.Ed. 1363; reh. den. 344 U. S. 849, 73 S.Ct. 6, 97 L.Ed. 660.

In 1960, *Graver Tank* and the doctrine of equivalents were again considered by the Court of Appeals for the Second Circuit in *International Latex Corp. v. Warner Bros. Co.*, (C. A. 2 1960) 276 F. 2d 557; cert. den. 364 U. S. 816, 81 S.Ct. 47, 5 L.Ed. 2d 47. *International Latex* involved product claims drawn to a woman's girdle and calling for the inner surface of the girdle material "being of a slightly roughened matted character for contact with the skin".

The patent specification disclosed obtaining this slightly roughened matted surface by abrading the material itself or abrading the form on which the material was molded. Defendant did not use abrading in forming its girdle, but rather, used a flocking process. Notwithstanding this difference in processing, plaintiff's and defendant's garments were **indistinguishable** even to the extent that defendant's own expert could not demonstrate the difference between them. Further, the Court found that the results achieved by both garments were the same in that the treatment to the inner surface of the garment in each case enhanced wearability. The Court also recognized that in some cases, flocking could be deemed to be the equivalent

of abrading, but significantly drew a sharp line of demarcation between equivalence in fact and equivalence in law and reasoned that even though the former might be present, the latter was not:

> "Nonetheless we think it would be incongruous to apply an equitable doctrine, which is, 'in *misericordiam* to relieve those who have failed to express their complete meaning', Claude Neon Lights v. E. Machlett & Son, 2 Cir., 1929, 36 F. 2d 574, 576, in such a way as to grant to a patentee, who had deliberately accepted a patent limited to a single application of his invention, protection against a defendant who had made a different application — particularly when neither the claims nor even the specifications contain language general enough to comprehend what defendant has done.
>
> We do not read Graver Tank & Manufacturing Co. v. Linde Air Products Co., 1950, 339 U. S. 605, 70 S.Ct. 854, 94 L.Ed. 1097, as leading to a contrary conclusion." 276 F. 2d 557, 564.

Finally, the decision in *International Latex* was heartily endorsed by the Court of Appeals for the Eighth Circuit in the recent case of *Parmelee Pharmaceutical Co. v. Zink*, (C. A. 8 1961) 285 F. 2d 465, which involved a patent relating to salt tablets and the plaintiff's attempt to apply the doctrine of equivalents to defendant's similar product. As in *International Latex*, the Court in *Parmelee* recognized *Graver* as being the controlling law on the doctrine of equivalents, but significantly pointed out Mr. Justice Jackson's language in *Graver Tank* to the effect that "equivalence is not the prisoner of a formula and it not an absolute, and things equal to the same thing in this area may not necessarily be equal to each other." 285 F. 2d at 473.

These decisions are in complete conflict with those embracing the philosophy of the expanded doctrine of equivalents such as in the case below. For in the case below, the representations of the patentee and his expressions in the claims are completely discarded in favor of the "function, mode of operation and result" test.

As a result of this conflict by the circuits, patent holders faced with the necessity of having to resort to the doctrine of equivalents to enforce their claims shop among the jurisdictions and bring their suits where the expanded doctrine is embraced. The instant case is a clear example of this shopping. Here, the real party in interest is the manufacturer of the *Mend-More* device — a New York (Second Circuit) corporation. Respondent did not sue the manufacturer in New York where the doctrine of equivalents is strictly and properly construed but first sought to judicially expand its patent by bringing this action against a customer using a single *Mend-More*. Having obtained the benefit of the Fourth Circuit view that the end result should be controlling, not what was granted by the Patent Office, respondent can now plead this decision against the manufacturer in the Second Circuit.

The conflict of views among the circuits inevitably results in varying applications of judicial principles and confusion to the public. The reports are replete with a multitude of decisions citing *Graver Tank*.[8] Its application has varied in almost every conceivable manner from Court to Court and from case to case within the same Court. The only principle that can be drawn from these cases is that utter confusion reigns.

We submit that it is incumbent upon this Court now to eliminate this conflict and confusion so that the public

[8]See *Shepard's United States Citations*.

may ascertain with some degree of certainty the extent of each patent monopoly.

III. The Existence of the Expanded Doctrine Makes Every Patent an Ambiguity, Thus Discouraging Rather Than Encouraging New Developments and the Progress of Science and the Useful Arts.

Congress has provided in Title 35, United States Code, §112, Paragraph 2, that the claims of a patent shall particularly point out and distinctly claim the subject matter which applicant regards as his invention. This requirement is essential if patents are to perform their true constitutional function "to promote the Progress of Science and the useful Arts". The patent law requires a full disclosure of the invention so that this entire disclosure will be available to the public when the seventeen year monopoly period has expired. Perhaps even more important, the disclosure is available as public knowledge immediately upon issue so as to encourage others to build on the disclosure, improve it, and further promote progress by devising other and better means of accomplishing the same end result. To accomplish this, the metes and bounds of the patented invention must be set forth definitely and distinctly. Otherwise, the subsequent inventor must wait for seventeen years before giving the public the benefit of his further progress in the art, else be subject to varying after the fact judicial interpretation and broadening of the initial patent grant.

The sound intent of Congress requiring claims particularly pointing out and claiming the subject matter of the invention is thwarted by the expanded doctrine of equivalents as applied by the Court of Appeals in this case. In effect, the invention as claimed by the patentee becomes meaningless and infringement is determined by varying

the scope of the grant years later to include any device for the same end purpose. Competitors are no longer able to determine (except by judicial interpretation after the fact) where they can or cannot compete. As a result of this, many will not spend the time, money and effort required to improve upon inventions patented by others. If expanded throughout the entire patent system, our society could soon be faced with a situation where the progress of science and the useful arts is advanced in a given field only once in every seventeen-year patent generation.

The present case is an excellent example of how the congressional intent has been thwarted. Here, Brown sought to speed up the conventional single needle method of mending pulled threads. To this end, he arranged a plurality of needles in a circle like the spokes of a wheel to permit them to be rotated against the pulled thread. This was his concept, nothing more. This is what he disclosed to the Patent Office and claimed as his invention. Brown's initial claims[9] were directed to this arrangement of a **circular series** of self-supporting work engaging elements mounted upon and radiating from a hub with the outer end portions of the elements being similarly inclined to radii passing through the tips, with the tips of the elements being disposed in a circle, and to other details of this arrangement. During the prosecution of his application the claims were amended several times to even more specifically define "a **circular series** of self sustaining work engaging elements mounted upon said hub", "a **circular series** of angularly spaced elements", "a **circular series** of resilient bristle-like elements", "a plurality of work engaging elements each having a smooth elongated work engaging surface, said work engaging surfaces being spaced apart, arranged

[9]Appendix to Brief of Appellant, pp. 38-40.

in a **circular series** about a common center and disposed substantially in a plane", and the like.

Brown might have claimed broadly "work engaging means", but he did not.[10] The patent issued on October 9, 1951, distinctly pointing out and claiming a **circular series** of work engaging elements as required by the Statute and giving notice to the world that these claims defined the metes and bounds of the invention.

The manufacturer of the *Mend-More* device acted in the manner contemplated by the purpose and intent of the patent laws. Recognizing the deficiencies in the Brown circular needle device, such as the problem of mounting the needles and alining their tips in an exact circle, rights were acquired from an improvement inventor[11] who had developed the *Mend-More* device as a further advance and progress in the art of mending hosiery. Relying on the language of the Brown claims specifying a **circular series** of elements, the *Mend-More* was placed on the market giving the hosiery industry the benefit of its improved features.

In April of 1964, some twelve and one-half years after the issuance of the Brown patent, the Court of Appeals for the Fourth Circuit has effectively rewritten Brown's claims so that they now cover any driven means for successively engaging or striking a "pulled thread" to restore it to normal condition. This decision nullifies the particular and distinct language in the claims, and ignores the Trial Judge's finding that the *Mend-More* **single** blade works in a different way from the patented *Marvel* device. It also ignores the substantial evidence sustaining the finding that the two devices do not operate in the same way.

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[10]This is understandable in view of the prior art.

[11]The *Mend-More* device is covered by an improvement patent issued to H. G. Mayer on January 14, 1958.

Finally, the decision of the Court of Appeals below wholly ignores two recent decisions of this Court again stating the basic premise of patent law that:

> "The claims made in the patent are the sole measure of the grant."[12]

and that:

> "But in rewarding useful invention, the 'rights and welfare of the community must be fairly dealt with and effectually guarded.' Kendall v. Winsor, 21 How. 322, 329, 16 L.Ed. 165 (1859). To that end the prerequisites to obtaining a patent are strictly observed, and when the patent has issued the limitations on its exercise are equally strictly enforced."
>
> * * *
>
> "Once the patent issues, it is strictly construed. United States v. Masonite Corp., 316 U. S. 265, 280, 62 S.Ct. 1070, 1078, 86 L.Ed. 1461 (1942), it cannot be used to secure any monopoly beyond that contained in the patent."[13]

Moreover, the decision here proves that the injustice of judicially expanding a patent claim and thereafter exacting retroactive damages for infringement based upon such expansion, as foreseen by Justices Black and Douglas in the dissenting opinion in *Graver Tank* has now become a reality, at least in the Fourth Circuit.

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[12] *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U. S. 336, 339, 81 S.Ct. 599, 601 (1961).

[13] *Sears Roebuck & Co. v. Stiffel Co.*, 376 U. S. 225, 84 S.Ct. 784, 788 (1964).

CONCLUSION

It is respectfully submitted that there is an immediate and critical need for this Court to clarify the proper application of the doctrine of equivalents in order to protect the public and prevent judicial expansion of patent monopolies.

Respectfully submitted,

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CERTIFICATE OF SERVICE

Three copies of the foregoing Petition for Writ of Certiorari have been served on the respondent by mailing said copies first class airmail, postage prepaid, to respondent's attorneys, Watson, Cole, Grindle & Watson, 815 Fifteenth Street, N.W., Washington 5, D. C., this 14th day of August, 1964.

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APPENDIX A

United States Court of Appeals

FOR THE FOURTH CIRCUIT

No. 9112.

MARVEL SPECIALTY COMPANY, INC.,
Appellant and Cross-Appellee,

versus

BELL HOSIERY MILLS, INC.,
Appellee and Cross-Appellant.

CROSS-APPEALS FROM THE UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF NORTH CAROLINA, AT ASHEVILLE. JAMES B. CRAVEN, JR., DISTRICT JUDGE.

(Argued November 12, 1963. Decided April 3, 1964.)

Before HAYNSWORTH and BOREMAN, Circuit Judges, and BARKSDALE, District Judge.

Robert F. Conrad (Watson, Cole, Grindle & Watson on brief) for Appellant and Cross-Appellee, and Clifton T. Hunt, Jr., (Paul B. Bell, and Eaton, Bell, Hunt & Seltzer on brief) for Appellee and Cross-Appellant.

BOREMAN, Circuit Judge.

This is an action for patent infringement. The District Court found the patent valid and infringed by one accused device but not infringed by another. Both parties have appealed.

The patent in suit is United States patent No. 2,570,637, entitled "Method of and Apparatus for Mending Hosiery" issued to Merle M. Brown in October of 1951 and relates to a method and machine for repairing "pulled threads" in knitted fabrics. However, at the beginning of the trial the *sole* method claim was disclaimed and only the apparatus claims are in issue here.

Plaintiff, Marvel Specialty Company, Inc., has been the owner of the Brown patent since its issuance. Defendant, Bell Hosiery Mills, Inc., is accused of infringing the Brown patent by its use of two types of mending machines purchased from Stanford Marley Distributing Company, Inc., of New York City. The latter company has conducted the defense of this action.

The accused devices, like the patented machine, are designed to repair pulled threads in knitted fabrics. Knitted fabrics normally are composed of one long strand of a single thread which is tied in a series of interlocking loops by the formation of slip knots. In knitted wear such as women's hosiery, these loops are formed in equal size and in parallel rows. A "pulled thread" in knitted fabric results when one of the loops so formed is snagged and becomes greatly enlarged thus reducing the size of a number of adjacent loops in the same row and drawing closer together the two parallel rows of loops on each side of the row containing the pulled thread. The loops so reduced produce a clearly definable line in the plane of the fabric which, together with the conspicuous pulled loop, readily detracts

from the fabric's appearance and renders it defective. The salability of an article containing a pulled thread is substantially impaired and unless the thread is repaired the article must be discarded or sold as second quality. In the manufacture of light weight knitted wear, particularly sheer articles such as ladies' hosiery, the pulling of a thread may very easily occur even when the article is handled by a skilled operator exercising all reasonable care.

Prior to the invention of the machine which is the subject matter of the Brown patent, the correction of pulled threads presented a serious problem to the hosiery manufacturing industry. Correcting pulled threads was costly and time consuming and resulted in limited production in many knitting mills. The loops were repaired principally by the use of a hand tool consisting of a single needle mounted in an appropriate handle. A hand-tool device of this type is the subject of the Hutchison patent,[1] and will be referred to as the Hutchison device or hand tool. Pulled loops were repaired by the use of the Hutchison device in the following manner: That portion of the fabric containing the pulled and reduced loops was placed under light tension over the opening of a hollow mending cup thus causing the thread from the pulled loop to move back into the plane of the fabric and to produce a hole bounded on each side by reduced loops. The operator then manipulated the needle in a stroking fashion, beginning at the area of the pulled thread and moving along the series of abnormally small loops on one side of the hole. On each stroke the needle contacted a plurality of loops. This stroking action had the effect of withdrawing thread from the enlarged loop and restoring it to the reduced loops, thus eventually returning all of the loops to their normal size.

[1]United States patent No. 2,493,876 issued to R. D. Hutchison January 10, 1950.

The Patented Machine

The plaintiff's patented commercial machine is called the "Marvel" machine. It is adapted to perform the same function accomplished by the Hutchison device, *i.e.*, the restoration of pulled and reduced loops in knitted fabric to their normal size. Essentially, the machine consists of a spindle, adapted to be rotated about its longitudinal axis, mounted in a handle, with a hub, on which a circular series of work engaging elements are mounted, affixed to the spindle and rotatable therewith. The work engaging elements of the Marvel machine are twelve flexible needles which extend radially from the hub so that their outer ends define a circle and are sloped rearwardly or away from the point of impact to avoid snagging or tearing the fabric. Although no definite thickness is specified in the patent, the ends of the work engaging elements must have a thickness which is less than the width of a course of the fabric. Plaintiff's commercial machine is driven by an electric motor at a speed which causes the impacting elements to strike the fabric at a rate of approximately 4800 blows per minute. The flexible elements travel in a circular path with each needle striking and sliding over a plurality of loops. The mending elements, exclusive of power source, of all of the machines are small enough to be easily held in the hand of an operator.

The Miracle Type Machine

One of the machines purchased from the Stanford Marley Distributing Company was the machine referred to throughout the trial as the Miracle type device[2] which very closely approximates the plaintiff's commercial machine.

[2]"Miracle" was the brand name of a machine embodying the same structure as the accused device. It has been used to designate the saw-tooth type machine.

The only significant difference between the two is in the nature of the impact or work engaging elements. Unlike the flexible, needlelike members of the Marvel, the impact elements of the Miracle machine are rigid projections shaped like the teeth of a saw. The speed of the Miracle machine may be varied and it is capable of operating at much higher speeds than the Marvel machine. Defendant concedes that claim I of the Brown patent literally comprehends the Miracle machine.

The Mend-More Machine

The differences between plaintiff's commercial machine and the Mend-More machine, the second accused device, are more fundamental. It was stipulated at trial that Mayer patent No. 2,819,598 describes the relevant parts of the accused Mend-More machine.[8] Basically, the Mend-More,

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[8]United States patent No. 2,819,598 was issued to H. G. Mayer on January 14, 1958. The accused Mend-More machine is made by Stanford Marley Distributing Company, Inc., under a license from Mayer. The Mayer patent specification itself states that it is an improvement on the Marvel device. It should be noted that the making of patentable improvements does not avoid infringement. Ackermans v. General Motors Corp., 202 F. 2d 642 (4 Cir.), *cert. denied*, 345 U. S. 996 (1953); Wine Ry. Appliance Co. v. Baltimore & O. R. Co., 78 F. 2d 312 (4 Cir. 1935); Waterproof Insulation Corp. v. Insulating Con. Corp., 153 F. Supp. 626 (D. Md. 1957). As stated in Wine Ry. Appliance Co. v. Baltimore & O. R. Co., *supra* at 316: "Patentable difference does not of itself tend to negative infringement. It may just as well be based upon infringement, plus improvement; and improvement may lie in addition, simplification, or variance."

Where an improvement patent comprehends an earlier patent, neither of the two patentees can lawfully use the invention of the other without the other's consent. Cantrell v. Wallick, 117 U. S. 689, 694 (1886).

like the Marvel, comprises a spindle adapted to be rotated about its longitudinal axis, with a hub, on which the work engaging element is mounted, fixed on the spindle and rotatable therewith. Unlike the Marvel, however, the Mend-More machine has a single work engaging element which is a rigid, elongated blade. This blade is eccentrically mounted on the hub and pivotally attached to the handle in such a manner that rotation of the hub, upon the communication of power from the motor, causes the blade to move in an elliptical or curvilinear path. The lower portion of the movement of the Mend-More blade is substantially the arc of a circle so that the *path* of the blade in the area in which the blade engages the fabric closely approximates the *path* of the impacting elements of the Marvel and Miracle machines. The working end of the Mend-More blade is V-shaped, its impacting edge being sloped rearwardly or away from the fabric. The Mend-More machine, unlike the Miracle machine, is not comprehended by the literal language of the Brown patent claims.

Procedural History of This Action

Before passing on to a consideration of the issues of validity and infringement, we review briefly the procedural history of this action. The complaint was filed in August of 1959. The defendant answered in February of 1960, admitting that the Brown patent was valid and infringed by the Miracle machine but denying that the Mend-More machine infringed. In March of 1960 the defendant filed an amended answer in which it deleted the confession of judgment with respect to the Miracle machine, and in September filed a further amended answer denying the validity of the Brown patent. Prior to the trial the plaintiff specified claims 1, 2, 4, 7, and 10 as those on which it would rely. At the opening of the trial, however, plaintiff disclaimed

claim 10,[4] the only method claim involved. The reason given for the disclaimer was that plaintiff had just discovered that the claim was misdescriptive of the method actually employed in the correction of pulled loops. Method claim 10 was concededly misdescriptive of the actual method employed in two respects. First, claim 10 described a method of striking a single loop a series of blows before the next loop was contacted. As previously stated, the Marvel device actually strikes a plurality of loops upon each movement of an impacting element across the fabric. Indeed, the operation described in claim 10 with reference to striking a single loop is impossible to perform. Secondly, claim 10 stated that the above procedure was continued

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[4]A formal disclaimer was filed in the patent office immediately after the trial. Method claim 10 is set forth below:

10. The method of restoring to original condition a distorted course of a knitted fabric one loop of which has become enlarged by the incorporation therein of material withdrawn from adjacent loops which have for this reason been reduced, comprising, placing an area of the fabric which includes the enlarged and reduced loops under light tension and, while maintaining the fabric under tension, withdrawing material from the enlarged loop and adding it to the reduced loops until all are restored substantially to normal size, by striking a distorted loop located closely adjacent the enlarged loop a series of relatively light rapidly repeated blows applied in a direction longitudinally of the distorted course and away from the enlarged loop by impact members the effective widths of the work engaging surfaces of which do not exceed the width of a normal course of the fabric, thereafter similarly applying a series of similarly directed relatively light and rapidly repeated blows in succession to those remaining distorted loops of the course which are located upon the same side of the enlarged loop as the loop first engaged and thereby restoring to normal size all distorted loops of the course upon that side of the enlarged loop and reducing the enlarged loop, and thereafter similarly acting upon in succession the distorted loops of that portion of the distorted course which are disposed upon the opposite side of the enlarged loop.

until all of the loops on one side of the center hole had been returned to their normal size before repair of the other side was begun. Actually, however, when the patented device is employed, some of the loops on the side first acted upon are enlarged beyond their normal size and are not returned to normal until the other side is repaired. It was the discovery of this latter phenomenon which allegedly caused the plaintiff to disclaim the method claim.

During the course of the trial, the defendant asked leave to amend its answer, pursuant to Rule 15(b) of the Federal Rules of Civil Procedure, to allege misuse of the Brown patent because of the inclusion of allegedly unlawful restrictive covenants in certain lease agreements covering the Marvel machine, and to allege that the patent was unenforceable because the plaintiff knew or should have known for some years that the method claim was invalid. The court granted leave to amend.

The District Court held that the Brown patent was valid and that the Miracle machine infringed but the Mend-More machine did not infringe. Collaterally, the court held that plaintiff was not guilty of misuse so as to bar enforcement of the patent. Each party has appealed from the rulings adverse to it.[5]

Validity

We believe that the District Court was plainly correct in holding the Brown patent valid. The basic requirements

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[5]On this appeal the defendant has not argued the question of misuse in its brief. Pursuant to this court's Rule 10, par. 8, the point "will be deemed abandoned."

for patentability are set forth in 35 U.S.C.A., sections 102 and 103.[6] Section 102 contains the requirement of novelty and says, in essence, that an invention is not patentable if it was previously known or used by others in this country, or patented or described in a printed publication in this or a foreign country. Section 103 adds to the requirement of novelty that of invention. It provides that an invention to be patentable must differ from the prior art in such a manner that the subject matter as a whole would not have been obvious at the time of the invention to a person having ordinary skill in the art.

There can be no question of the novelty of Brown's invention. As pointed out by the District Court, there was no patent literature on machines for mending pulled threads prior to the Brown invention. Except for the Hutchison hand tool, there were no machines in existence which could be used to repair pulled threads in knitted fabric. The prior art cited by the Patent Office ranges from auto wheels to rug beaters and certainly does not demonstrate lack of novelty in Brown's invention. A more closely

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[6] 35 U.S.C.A. § 102 (1958) provides in pertinent part:

"A person shall be entitled to a patent unless—

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, * * *"

35 U.S.C.A. § 103 (1958) provides:

"A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made."

related invention is the German patent cited by the defendant in the District Court.[7] This patent, however, relates to an apparatus for smoothing woven fabrics and could not be used to correct pulled threads in knitted fabric. It clearly does not anticipate the Brown invention so as to negate novelty under section 102. The only real question as to the validity of the patent is not one of novelty or prior use but one of invention.

The extent to which the enactment of section 103 of the statute altered prior law is not altogether clear. See *Berry Brothers Corporation* v. *Sigmon*, 317 F. 2d 700, 704 (4 Cir. 1963); *Triumph Hosiery Mills, Inc.* v. *Alamance Industries, Inc.*, 299 F. 2d 793, 800 (4 Cir.), *cert. denied*, 370 U. S. 924 (1962). It is apparent, however, that something less than a "flash of genius" or "inventive genius" may fulfill the mandate of the statute. *Berry Brothers Corporation* v. *Sigmon*, supra; *Reiner* v. *I. Leon Co.*, 285 F. 2d 501 (2 Cir. 1960) (L. Hand), *cert. denied*, 366 U. S. 929 (1961). A number of cases, both before and after enactment of the statute, have undertaken to comprehensively set forth the standard of invention to be used as a test for determining patent validity. When the mass of verbiage has been distilled, however, we have little more to guide us than the test which is incorporated in section 103, that is, whether, in view of the prior art, the subject matter of the patent would have been obvious at the time of the invention to a person having ordinary skill in the art.

Of course, any determination of obviousness requires analysis of the extent to which the prior art had developed. As previously stated, the only prior art device used to repair pulled threads was the Hutchison device which accomplished the same result as the patented machine, *i.e.*, the

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[7]German, Ruizand Patent No. 23,334, issued January 9, 1883.

restoration of pulled threads in knitted fabric. In a sense, it achieved the result in the same manner by striking the reduced loops a plurality of blows and withdrawing thread from the enlarged loop. But, as the District Court found, the patented machine operates in a fundamentally different manner from the Hutchison device. "The rotation of the Brown spindle and hub is not the same operation as the stroking hand operation." And, of course, the differences in structure are great. There is no question that the patented machine represented a great advance in the art of correcting pulled threads in knitted fabrics. We think it clear that mere familiarity with the teachings of the Hutchison patent would not suggest the advance made by Brown. But defendant contends that knowledge of patents and machines from other arts would, when considered in the light of Hutchison, render the Brown invention obvious. Principal reliance is placed by the defendant upon the German Ruizand patent (No. 23,334) and the United States Woodhead patent (No. 2,084,367).

Both the Ruizand and Woodhead patents relate to machines designed to operate on woven fabrics. Ruizand discloses a circular series of self-sustaining impact members which operate to straighten or smooth the threads of woven fabric as the cloth is moved beneath the impacting members. The impacting members are attached to hubs or discs which are mounted on a shaft next to a grooved pulley. A rope belt passing through the pulley rotates the hubs causing the impact members to engage the work. In operation, the hubs rotate in a fixed position and a bolt of cloth supported at one end is led beneath the rotating discs and taken up at the other end. As the cloth passes under the rotating wheels which are spaced a short distance apart across the fabric, the circularly mounted blades beat the

fabric, broadening and smoothing the threads. The impacting elements of the Ruizand machine are elongated blades having a diameter of between two and three feet and a radius at the ends of approximately one inch. The machine is approximately six feet square.

The Woodhead patent relates to an apparatus for preshrinking woven cloth. Its relevant disclosure concerns an assemblage of closely positioned, thin, saw-toothed discs upon a shaft or axis. The discs, or blades, are adapted to engage a strip of cloth as it is moved along an apron beneath them. The blades, which are rotated in the same direction that the cloth is moving, penetrate the fabric and move the weft threads closer together. The patent states that the teeth of the discs "are preferably relatively fine, pointed at their ends, beveled on the sides and slightly undercut to permit ready penetration of the cloth web and yarn components * * * without injury or tearing upon entry and withdrawal." Like the blades in Ruizand, the discs described in the Woodhead patent are very large, probably a foot in diameter. The teeth of the discs are sloped toward the point of impact with the fabric or in the opposite direction from the slope of the impacting elements of the Marvel machine. Since the teeth actually penetrate the fabric, the speed of the discs relative to the speed of the cloth must be very slow to avoid tearing the fabric.

It is apparent that the Ruizand and Woodhead machines differ greatly, in both structure and operation, from the Marvel machine. Both are designed to operate on woven cloth quite dissimilar in composition to knitted fabric. Neither could be modified to correct pulled threads in

knitted wear.[8] Other prior art citations are even less apposite.

Analysis of the prior art citations discloses that each of the elements of the Brown invention is old, but that fact does not defeat patentability. As stated by Judge Learned Hand in *Reiner* v. *I. Leon Co.*, 285 F. 2d 501, 503 (2 Cir. 1960):

> "* * * It is idle to say that combinations of old elements cannot be inventions; substantially every invention is for such a 'combination': that is to say, it consists of former elements in a new assemblage. All the constituents may be old, if their new concourse would not 'have been obvious at the time the invention was made to a person having ordinary skill in the art' * * *."

Accord, *Duo-Flex Corporation* v. *Building Service Company*, 322 F. 2d 94 (5 Cir. 1963). And, as this court has stated, the validity of a patent combining old elements "depends upon whether these elements have been put together in such a manner, not obvious to a person skilled in the art, as to produce a new and better result * * *." *O. M. I. Corporation of America* v. *Kelsh Instrument Co.*, 279 F. 2d 579, 582 (4 Cir. 1960); see *Entron of Maryland, Inc.* v. *Jerrold Electronics Corp.*, 295 F. 2d 670 (4 Cir. 1961); *Colgate-Palmolive Company* v. *Carter Products*, 230 F. 2d 855 (4 Cir.), *cert. denied*, 352 U. S. 843 (1956); *American Chain & Cable Co.* v. *Rochester Ropes*, 199 F. 2d 325 (4 Cir. 1952). Although the Hutchison hand tool could be used to repair pulled threads, the patented Marvel

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[8]Of course, even if the machine could be modified to work on knitted fabric that fact would not defeat patentability unless modification would have been suggested to a person of ordinary skill in the art. See Duo-Flex Corporation v. Building Service Company, 322 F. 2d 94, 96 (5 Cir. 1963).

machine manifestly achieves a new and better result within the meaning of the above-quoted language.

The very significant differences between the Ruizand and Woodhead machines and the patented Marvel machine, in terms of function and manner of operation, militate against a determination that the Brown invention would have been obvious to a person of ordinary skill in the art. Such a determination would be particularly difficult in view of the great disparity in composition between knitted fabric and the woven material on which the Ruizand and Woodhead machines were designed to operate.

Defendant emphasizes the testimony of its expert, Robert H. Lawson,[9] that the prior art could teach one interested in the repair of pulled threads to construct a suitable apparatus. A sufficient rejoinder is the statement of Justice McKenna in *Diamond Rubber Co.* v. *Consol. Tire Co.*, 220 U. S. 428, 435 (1911):

> "* * * Knowledge after the event is always easy, and problems once solved present no difficulties, indeed, may be represented as never having had any, and expert witnesses may be brought forward to show that the new thing which seemed to have eluded the search of the world was always ready at hand and easy to be seen by a merely skillful attention. But the law has other tests of the invention than subtle conjectures of what might have been seen and yet was not. * * *"

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[9]It should be noted that Mr. Lawson did not testify that the Brown invention would have been obvious to a person of ordinary skill in the art. His testimony was to the effect that inventions had been suggested to him by prior art which was further removed than the German patent. Mr. Lawson was, perhaps, a person of greater than ordinary skill; having himself secured more than 200 patents.

The difficulty of determining subjectively at some removed time whether a particular invention would have been obvious to a person of ordinary skill in the art has caused this court, as well as others, to seek objective criteria of obviousness. See, *e.g.*, *Honolulu Oil Corporation* v. *Shelby Poultry Company*, 293 F. 2d 127, 130-31 (4 Cir. 1961); *Reiner* v. *I. Leon Co.*, 285 F. 2d 501, 503-04 (Cir. 1960). Resort to the objective indicia in the record of this case amply supports the District Court's determination of validity.

Prior to the Brown invention, the correction of pulled threads represented a serious problem of long duration in the knitting industry. Prior art tools and methods were inadequate to cope with the problem. Use of the Hutchison hand tool was costly and time-consuming. It resulted in reduced production in many mills. Yet, no one came forward with a better means of correcting pulled threads. When the Brown invention was disclosed it was immediately accepted by the industry as the solution to the problem. Within three and a half months after the first attempt to lease a machine embodying the Brown patent, every major hosiery mill in the United States had taken a lease. Within eight months approximately 635 mills, comprising 90 per cent of the industry, had accepted leases. The commercial success achieved by the machine was indeed remarkable and it was accomplished with very little advertising. While commercial success cannot lend validity to a patent where invention is clearly wanting, this court has consistently recognized that it is a relevant factor which may be convincing in a close case. See, *e.g.*, *Power Curbers, Inc.* v. *E. D. Etnyre & Co.*, 298 F. 2d 484 (4 Cir. 1962); *S. H. Kress & Company* v. *Aghnides*, 246 F. 2d 718 (4 Cir.), *cert. denied*, 355 U. S. 889 (1957); *Hutzler Bros. Co.* v. *Sales Affiliates*, 164 F. 2d 260 (4 Cir. 1947). In

addition, the disclosures of the Brown patent resulted in a great benefit to the hosiery industry. The cost of mending was reduced from an average of seventy cents to twenty-five cents per dozen hose. At the same time, the earnings of menders were increased and the mending of long pulls made practicable. As pointed out by the District Court, the correction of pulled threads was changed from a tedious hand operation to a mass production machine operation.

In view of the apparent need which so long had persisted, the obvious benefits to be gained by both the inventor and the industry from meeting the need, and the failure of anyone to meet it, we think the finding of patentable invention can be sustained even without considering the statutory presumption of validity.[10]

Defendant predicates a further attack on the patent's validity upon an alleged failure to comply with 35 U.S.C.A. section 112. Section 112[11] provides that the patent specification shall contain a description of the invention and of

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[10]35 U.S.C.A. § 282 (1958) provides that "a patent shall be presumed valid. The burden of establishing invalidity of a patent shall rest on a party asserting it." Defendant has argued that this presumption is weakened or destroyed by the failure of the plaintiff to disclose to the Patent Office the fact that the width of the Hutchison needle was less than a normal course of the fabric on which it was used. Even if defendant's contention is correct, which we do not decide, it would not change our view of the case.

[11]Section 112 provides in pertinent part:

"The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

"The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention."

the manner of making and using it. It is undisputed that the patent adequately discloses how to make the machine. Defendant contends, however, that since the specification is phrased in terms of the concededly erroneous method claim 10, it does not disclose how the machine is actually used. In other words, defendant asserts that the specifications teach an operator to strike one loop a plurality of blows before contacting the next loop. In fact, when the machine is used a plurality of loops are contacted upon the movement of a single impact member across the fabric; therefore, defendant asserts, the specifications are fatally defective in that the operator is told to strike one loop when, in fact, he must strike a number of loops. This contention is without merit. It is not necessary, to sustain the validity of an apparatus claim, that an inventor understand or be able to articulate the scientific principles underlying his invention.[12] The test of whether disclosure is adequate is an operational one. All the statute requires is that the patent disclose how to make and use the invention. We believe the Brown patent meets this requirement. The specifications teach an operator to place the fabric containing the pulled thread in slight tension over the opening of a mending cup. They then direct the operator to position the implement so that the tips of the work-engaging elements will successively engage the first collapsed loop on one side of the center hole. The operator is then told to draw the implement toward himself while maintaining the tips of the elements in the same plane so that they will continue to strike the loops and to repeat the operation if necessary. All of the information necessary to enable one skilled in the art to use the Brown invention is contained

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[12]Lever Bros. Co. v. Procter & Gamble Mfg. Co., 139 F. 2d 633 (4 Cir. 1943); see Standard Coil Products Co. v. General Electric Company, 306 F. 2d 319, 323 (2 Cir. 1962).

in the specification. The inaccurate description of delivering a plurality of blows to a single loop is not material and any difficulty due thereto is more theoretical than real. As the defendant has emphasized, any attempt to use the patented machine results in a plurality of loops being contacted. When a machine is used as directed in the specifications, except that instead of striking a single loop the impacting elements strike a number of loops, the pulled thread is repaired. This case differs markedly from those cases relied upon by defendant where an inadequate or erroneous disclosure resulted in actual inability to make or use the invention.[13] The Brown invention has been put into practice. The world has been given something new and taught to use it. *Lever Bros. Co.* v. *Procter & Gamble Mfg. Co.*, 139 F. 2d 633, 638 (4 Cir. 1943). We think the erroneous description relates much more directly to the method by which the invention operates than it does to how it is used. The sole method claim has been disclaimed and, since the specifications sufficiently explain how the machine is made and used, the apparatus claims are not affected.[14]

Infringement by Miracle

Certainly the most difficult question to resolve is that of infringement. As previously stated, the District Court held that the Miracle type machine infringed the patented invention while the Mend-More machine did not. We think the court's conclusion with respect to the Miracle machine

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[13]See, *e.g.*, Standard Coil Products Co. v. General Electric Company (see footnote 12).

[14]35 U.S.C.A. § 253 (1958). In relevant part section 253 provides:

"Whenever, without any deceptive intention, a claim of a patent is invalid the remaining claims shall not thereby be rendered invalid. A patentee * * * may, on payment of the fee required by law, make disclaimer of any complete claim * * *."

is plainly correct. Claim 1 of the Brown patent, stipulated as representative of the apparatus claims in issue, reads as follows:

> "1. Apparatus for restoring to original condition a knitted fabric one loop of which has become enlarged and adjacent loops reduced, comprising, in combination, a spindle adapted to be rotated about its longitudinal axis, a hub fixed upon the spindle and rotatable therewith, and a circular series of self sustaining work engaging elements mounted upon said hub, said elements being adapted to successively engage the work when the hub is rotated, the work engaging surfaces of said elements at the outer ends thereof facing forwardly and outwardly and being smooth and no wider than a normal course of the fabric to be restored."

It is undisputed that claim 1, considered by itself, literally comprehends the Miracle machine. Defendant's sole contention with respect to infringement by the Miracle machine seems to be that when claim 1 is read in the context of the specifications it must be construed as claiming only an apparatus which delivers a number of blows to a single loop. Were we to adopt defendant's argument, we would indeed be engaging in circuitous reasoning. Such a construction of claim 1 clearly would render it invalid as describing an invention which is impossible to construct and use. It is true, as defendant asserts, that patent claims should be interpreted in light of the specifications. See, *e.g., Wheeling Stamping Co.* v. *Standard Cap & Molding Co.*, 155 F. 2d 6 (4 Cir.), *cert. denied*, 329 U. S. 764 (1946). Here, however, we cannot assign such significance to the erroneous portion of the specifications. Apparently, Brown originally misconceived the method by which his invention operated but there is nothing in either the speci-

fications or the claims to suggest that the latter are limited to machines which operate to deliver a plurality of blows to one loop before contacting another. Claim 1 should be interpreted in accordance with its plain meaning. See *Cameron Iron Works* v. *Stekoll*, 242 F. 2d 17 (5 Cir. 1957). So construed, it comprehends the Miracle type machine. Therefore, use of the Miracle infringes the Brown invention.

Infringement by Mend-More

Resolution of the question, whether the Mend-More machine infringes the Brown invention, is more difficult. Moreover, both parties have recognized this question as the crucial issue. It is the Mend-More machine which the defendant has principally used and it is that machine which Stanford Marley Distributing Co., Inc., would like to sell.

As previously stated, the Mend-More machine is not literally covered by the Brown patent claims. Therefore, the resolution of the question of infringement depends upon whether the Mend-More machine is equivalent to the patented machine under the doctrine of *Graver Mfg. Co.* v. *Linde Co.*, 339 U. S. 605 (1950). The reasoning of the District Court in holding that the Mend-More machine did not infringe the Brown patent is revealed in the following excerpt from its opinion:

> "* * * Instead of a plurality of work engaging needles, the Mend-More device employs a single blade mounted eccentrically on a hub. The rotation of the hub is increased some ten times as compared to the Brown device, thereby getting approximately the same number of strokes or blows per minute against the fabric. The action on the fabric is closely similar, but the stroke is slightly flatter and more closely approximates the Hutchison device movement than does the Brown device.

Except for the Hutchison prior art, the Graver Tank doctrine of equivalents ought perhaps to be applied to the Mend-More device, but, in view of Hutchison, the broad construction urged by plaintiff for the Brown patent cannot be allowed. To apply the doctrine of equivalents in this case would ignore the teachings of the patent, the representations upon which the claims in suit were allowed, and the representations by which the validity of the Brown patent has been sustained in the prior portion of this opinion. * * * It would be contrary to the teachings of the Brown patent and its file history to say that a single blade is the equivalent of a series of circular arranged flexible needles. Although function and result are the same, the two devices do not operate in the same way. This is emphasized by Brown's claim of novelty over the Hutchison single needle device: the circular arrangement of plural needles. Brown narrowed his claims in order to get his patent issued over Hutchison. He should not now be permitted to get through the doctrine of equivalents what he could not have obtained initially. * * *"

The plaintiff's position, essentially, is that although the District Court's basic factual findings were correct, it drew erroneous conclusions therefrom. We are inclined to agree. A protection which extended only to those devices which exactly copy the patented invention would be a hollow and useless safeguard. The essence of the doctrine of equivalents is that one may not pirate another's patent. The test enunciated in the *Graver Tank* case for determining equivalency is whether the accused device "performs substantially the same function in substantially the same way to obtain the same result." The Supreme Court pointed out that the theory upon which the doctrine of equivalency is founded "is that 'if two devices do the same

work in substantially the same way, and accomplish substantially the same result, they are the same, even though they differ in name, form, or shape.' "[15]

The portion of the District Court's opinion previously quoted indicates that the court was satisfied that the Mend-More met the *Graver Tank* test of equivalency but felt precluded, by its view of the effect of the prior art Hutchison device and plaintiff's representations with respect thereto, from giving the Brown patent a scope which would include the Mend-More machine. Temporarily putting aside consideration of the effect of the Hutchison patent, it seems clear that the doctrine of equivalents should be applied to the Mend-More machine.

The elements of the Brown invention as set forth in claim 1 include: (1) A spindle adapted to be rotated about its longitudinal axis; (2) a hub fixed upon the spindle and rotatable therewith; and (3) a circular series of self-sustaining work-engaging elements mounted upon the hub. It is apparent that all of the elements of claim 1 except the last are embodied in the Mend-More machine. Instead of a circular series of work-engaging members, the Mend-More uses a single blade. The question for resolution, then, is whether the single blade of the Mend-More is the equivalent of the circular series of impacting members of the Marvel. And this, of course, depends upon whether the two machines perform substantially the same function in substantially the same way to obtain the same result.

In holding the Mend-More machine not to infringe, the District Court was, we believe, unduly influenced by merely formal differences in structure which would not preclude

[15] 339 U. S. at 608.

the accused infringer from utilizing the full advantages of the Brown invention.[16] The Mend-More machine unquestionably accomplishes the same result as the patented machine. It performs the same function. We believe it performs that function in substantially the same way.

In operation, the single blade of the Mend-More is so positioned as to engage the first distorted loop on one side of the center hole. It operates to correct the pulled thread, in the same manner as the Marvel, by delivering repeated light blows to the reduced loops and thereby withdrawing the excess thread from the enlarged loop. Like the impacting elements of the Marvel, the leading edge of the Mend-More blade is sloped rearwardly to avoid snagging and tearing the fabric. Thus, in operation the impacting elements of both machines strike and slide over the distorted loops. Significantly, the working element of the Mend-More, like that of the Marvel, engages the fabric through the action of a combination of a rotating spindle and hub. Moreover, the speed of the hub's rotation is increased some ten times so that the single blade of the Mend-More delivers approximately the same number of blows to the fabric per minute as the twelve work-engaging members of the Marvel.

Defendant has emphasized the fact that the working element of the Mend-More travels in an elliptical or curvilinear path, whereas the path of the Marvel needles is circular. However, we do not think the movement of the blade *outside of the working area* is important.[17] In the

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[16]See Duo-Flex Corporation v. Building Service Company, *supra* at 99. (See footnote 8.)

[17]*Cf.* Keiser v. High Point Hardware Company, 199 F. Supp. 623 (M.D. N.C. 1961), *rev'd on other grounds*, 311 F. 2d 850 (4 Cir. 1962).

working area[18] the Mend-More blade travels in a path, substantially the arc of a circle. It is the path of travel in this area which is significant because it determines how the impact element will engage and act upon the fabric. Since the impact elements of both the Marvel and Mend-More machines travel in substantially the same path through the working area, the action of the elements of each machine on the fabric is, as the District Court found, "closely similar." Additionally, it should be noted that the movement achieved in the Mend-More by the eccentric connection of the blade to the hub is an old and well known mechanical movement which could be readily adapted to produce the action upon the fabric achieved by the Marvel machine.

In the *Graver Tank* case, the Supreme Court emphasized that in determining equivalence "consideration must be given to the purpose for which an ingredient is used in a patent, the qualities it has when combined with the other ingredients, and the function which it is intended to perform. An important factor is whether persons reasonably skilled in the art would have known of the interchangeability of an ingredient not contained in the patent with one that was."[19] In the circumstances here, we are convinced that the single blade of the Mend-More is in fact the fair equivalent of the circular series of work-engaging elements claimed in the patent.

Of course, equivalency in patent law cannot be determined in vacuo. The question of infringement must be considered in the context of the prior art and with an eye to the contribution made by the patented invention. As

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[18]The "working area" includes the area immediately preceding and following the blade's contact with the fabric.

[19]Graver Mfg. Co. v. Linde Co., 339 U. S. 605, 609 (1950).

previously stated, the District Court felt that the prior art Hutchison device precluded its giving a scope to the invention which would cover the single blade Mend-More. The court emphasized that to apply the doctrine of equivalents to the single blade device would ignore the basis upon which it had sustained the patent's validity, and stated: "The claims of the Brown patent 7, 4, 2 and 1 fail to cover the Mend-More device by the very same point or points of novelty that distinguish the claims over Hutchison." In this determination we are of the opinion that the District Court was in error. The Brown invention, completely aside from the circular arrangement of the work-engaging elements, is clearly distinguishable from the Hutchison device. The Brown invention, like the Mend-More, involves a combination of elements. The Hutchison device comprises a single element. Mending by both the Brown and Mend-More machines involves the combined action of a spindle and hub which is different from the stroking hand operation. The District Court, in the portion of its opinion dealing with validity, recognized these differences. It distinguished the spindle used in the Brown invention from the handle of the Hutchison device. The court then went on to point out that the two devices operate in a different manner: "But the actual operation of Brown and Hutchison are different — and not simply in the means for rotating the hub, which is not claimed by Brown. The rotation of the Brown spindle and hub is not the same operation as the stroking hand operation. The work is done in a different way, although the impacting element(s) strike(s) the fabric similarly, with the same result." It was on the basis of the above differences, ***common to both Marvel and Mend-More,*** rather than the circular arrangement of a series of elements, that the District Court properly distinguished the Brown invention from the prior art Hutchison device.

Clearly the Brown invention more closely approximates the Mend-More machine than it does the prior art hand tool. The Hutchison patent does not preclude a scope for the Brown patent which would cover the Mend-More machine. Such a narrow construction of the Brown patent would be particularly incongruous in view of the very significant contribution to the art made by the invention.

The art to which the Brown invention relates is not a crowded one. The invention is more than a narrow improvement to a complex machine, protection for which should be strictly limited to secure for the public that which it previously had. On the contrary, Brown has ushered in a new art, prompting others to emulate as well as to improve upon his invention. The Brown invention relates to the first machine ever devised which employs a combination of elements to correct pulled threads in knitted wear. As such, it is entitled to protection broad enough to cover the Mend-More machine.[20]

In conclusion, we have carefully reviewed the file wrapper of the Brown patent to determine if there is any representation therein which should estop the plaintiff from claiming that the Mend-More infringes its invention.[21] We have found none. The Hutchison device was not cited against any of the apparatus claims of the Brown patent. No representations based upon the circular series of im-

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[20]See Specialty Equipment & Mach. Corp. v. Zell Motor Car Co., 193 F. 2d 515 (4 Cir. 1952); Saco-Lowell Shops v. Reynolds, 141 F. 2d 587 (4 Cir. 1944).

[21]In its opinion, the District Court indicated that plaintiff had secured the issuance of its patent by representing to the Patent Office that its invention was different from the Hutchison device because of the circular arrangement of plural needles. On appeal, the defendant has not attempted to defend that position but has argued instead that plaintiff secured the patent by erroneous representations as to the method by which its invention operated.

pacting elements were made to distinguish the Brown invention from the Hutchison device. Plaintiff did attempt to distinguish its method claim from the Hutchison patent by pointing out that the impacting members of its invention delivered a series of blows to one loop before acting upon another. However, as previously pointed out, the method claim was disclaimed and there is no reason to suppose that the apparatus claims were granted because of the erroneous representations with respect to method.[22] We reach the conclusion that in law, as well as in fact, the Mend-More device is the equivalent of the Brown invention and infringes.

Affirmed in part, reversed in part and remanded for appropriate proceedings.

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[22]Indeed, review of the file wrapper convinces us that the Examiner was fully aware of the rule that patentability of an apparatus claim cannot be predicated upon a new method.

APPENDIX B

UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT

No. 9112

MARVEL SPECIALTY COMPANY, INC.
Plaintiff-Appellant

v.

BELL HOSIERY MILLS, INC.
Defendant-Appellee

ORDER DENYING PETITION FOR REHEARING

Upon consideration of the Petition for Rehearing filed by Bell Hosiery Mills, Inc., on May 4, 1964, it is ORDERED that said Petition be, and the same is hereby, denied.

FILED
MAY 19, 1964
MAURICE S. DEAN
Clerk

CLEMENT F. HAYNSWORTH, JR.
United States Circuit Judge

HERBERT S. BOREMAN
United States Circuit Judge

A. D. BARKSDALE
United States District Judge

Date: May , 1964.
A true copy,
Teste:

MAURICE S. DEAN, *Clerk*
U. S. Court of Appeals for the Fourth Circuit
By /s/ MARGARET L. DAVIS
Deputy Clerk

SEAL
UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT

APPENDIX C

OPINION

Filed April 29, 1963

UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF NORTH CAROLINA ASHEVILLE DIVISION

Civil No. 1863

MARVEL SPECIALTY COMPANY, INC., *Plaintiff,*

versus

BELL HOSIERY MILLS, INC., *Defendant*

(Argued August 20, 1962 Decided)

Robert F. Conrad, Watson, Cole, Grindle & Watson, Washington, D. C. and Kestor Walton, Asheville, North Carolina, for Plaintiff; Paul B. Bell and Clifton T. Hunt, Jr., Charlotte, North Carolina, for Defendant.

CRAVEN, Chief Judge:

Apparatus for mending hosiery is the subject of the disputed patent in this case. Simultaneously with the filing of this opinion, the court has filed detailed findings of fact and conclusions of law. Briefly summarized, this is a controversy involving validity and infringement of Brown

Patent No. 2,570,637 entitled "Method of and Apparatus for Mending Hosiery" issued October 9, 1951. Plaintiff is the owner of the Brown patent and has been since its issuance. Defendant is accused of infringing the Brown patent by the use of certain mending devices purchased from Stanford Marley Distributing Company, Inc., of New York City, which company is defending this suit for the defendant Bell Hosiery Mills, Inc. By the time of trial, the issue of infringement had been narrowed to Claims 1, 2, 4 and 7, and method Claim 10. After the trial commenced, the plaintiff disclaimed method Claim 10, leaving only the apparatus claims at issue.

The defendant denies infringement of all claims and affirmatively urges invalidity of the Brown patent.

The claims at issue relate to apparatus for repairing pulled threads in knitted fabric. A pulled thread occurs in knitted fabric, such as ladies' sheer nylon hosiery, when a loop in the fabric is greatly enlarged without breaking the thread. This enlargement is brought about through the withdrawal of thread from several adjacent loops on both sides of the pulled loop, thereby resulting in the reduction in size of such adjacent loops. The enlarged loop is displaced out of the plane of the fabric while the reduced loops define a visible line which detracts from the appearance of the fabric. Prior to the Brown patent, pulled threads were mended, for the most part, with a single needle device (fitted with a suitable handle) manipulated by the hand of an operator. This simple device will be referred to hereinafter as the Hutchison device and is the subject of Hutchison Patent No. 2,493,876.

The Brown apparatus (called "Marvel" in the record) for accomplishing this restoration of pulled threads is a mending head comprising a plurality of flexible, curved

needles extending radially in a circular series from a hub mounted on a rotatable shaft. The "means for rotating the hub" is not claimed by plaintiff as part of the invention.

There are two accused devices. The Miracle device comprises a metal disc having a plurality of radially extending rigid saw tooth-shaped projections. The disc is mounted on a hub which is, in turn, mounted for rotation on a shaft.

The single blade Mend-More device comprises a single, rigid elongated blade which is eccentrically connected to a hub which is, in turn, mounted for rotation on a shaft and slidably connected to the housing which encloses such shaft.

The single needle hand device (Hutchison), the multiple needle device (Brown), the saw tooth device (Miracle), and the single blade device (Mend-More) all perform the same function during mending of striking several loops in a line one blow each as the work engaging element (or elements) passes across the fabric. The action on the pulled thread is closely similar. The results accomplished with all four devices are indistinguishable.

Work preparation is identical regardless of which one of the foregoing four devices is being used. The fabric containing the defect is placed under tension over a mending cup. This tensioning of the fabric results in the enlarged displaced loop's partially re-entering the plane of the fabric, thus creating a rather large hole in the fabric, bounded by abnormally large loops which are, in turn, bounded by reduced loops. Using any one of the four devices results in moving the excess thread through or into the distorted loops and restoring them to normal size.

VALIDITY

The asserted invalidity of plaintiff's combination apparatus patent depends upon whether it was obvious to one possessing ordinary skill in the art to piece together the combination in the same way as Brown. Neither Congress nor the courts have formulated a more precise test. *Entron of Maryland, Inc.* v. *Jerrold Electronics Corp.*, 295 F. 2d 670 (4th Cir. 1961).

The controversy turns upon the application to the facts of what Judge Learned Hand called a "misty" rule of law. *Reiner* v. *I. Leon Co.*, 285 F. 2d 501, 503, 504 (2d Cir. 1960). Such application is a process of search and comparison, and little else, and often provokes differences of opinion among judges. See: Cardozo, *The Nature of the Judicial Process*, 163, 165 (1960 Ed.). Where possible, the determination of obviousness must be made objectively and not on the basis of subjective speculation. *Honolulu Oil Corp.* v. *Shelby Poultry Co.*, 293 F. 2d 127, 131, 132 (4th Cir. 1961).

The Brown apparatus is the first machine ever devised for the correction of pulled threads in hosiery — unless the Hutchison hand implement be termed a "machine". But defendant strenuously urges that there is nothing new about a rotatable shaft, or a hub mounted thereon, or a needle, or a plurality of needles extending radially from a hub. While it is true that none of these elements are novel, the combination of them was entirely new in the industry. It is perhaps not quite correct to call this patent a "combination of known elements". There were no "known elements" in the prior art except the needle with a handle fitted to it; nor can the handle be equated with the spindle of Brown. The latter was adapted to be rotated about its

longitudinal axis, which is not true of the handle operation in Hutchison.

Hutchison comes far closer to anticipation of the Brown patent than any other citation of the prior art. The result is the same (the mending of pulled threads), and the method of achieving the result is essentially similar, *i.e.*, striking or stroking several loops in a line one below each as the (or each) work engaging element is passed across the fabric. But the actual operation of Brown and Hutchison are different — and not simply in the means for rotating the hub, which is not claimed by Brown. The rotation of the Brown spindle and hub is not the same operation as the stroking hand operation. The work is done in a different way, although the impacting element(s) strike(s) the fabric similarly, with the same result. The claims of Brown are sufficiently narrow to be distinctive over the prior Hutchison patent, and the result achieved is that intended: validity narrowed by the distinctive claims to cover devices only substantially similar to the device described in the Brown patent.

Whether the elements are old or new, the new arrangement or combination of them is an entity entirely distinct from the elements and is patentable if it either produces a new result or performs an old result in an improved manner. Amdur., *Patent Fundamentals*, p. 184 (1959). Brown achieves an old result, *i.e.*, the mending of pulled threads, which had previously been achieved by Hutchison, but accomplishes this old result in a greatly improved manner and with tremendously increased efficiency. As a result of the Brown patent, the cost of mending was reduced from 70 cents to 25 cents per dozen of hose while increasing the earnings of menders and making practical the mending of long pulls. Mending pulled threads was changed from a slow hand operation to a mass production type machine

operation. Ever since sheer hosiery became popular with women, the problem of pulled threads in the manufacture of it has been of importance to the industry. With the increasing use of nylon after World War II, the problem became of greater importance.

The first effort to lease a machine embodying the Brown patent occurred in November of 1949. Within three and a half months thereafter, every major hosiery mill in the United States had taken a lease. Within approximately eight months, around 635 hosiery mills had accepted leases, comprising 90 per cent of the hosiery industry. All of this remarkable acceptance was accomplished without advertising, except for an ad run in "Women's Wear Daily" about three months after the machine was first introduced. This is indeed remarkable commercial success. The principal salesman of the machine stated that he could not recall one instance of a hosiery manufacturer who saw a demonstration of the machine and declined to accept a lease. All of the necessary parts were available to the trade for many years, yet no one prior to Brown thought to assemble the simple device which is the subject of the apparatus claims.

There was no patent literature on machines for mending pulled threads prior to the Brown invention. Except for Hutchison, which has already been discussed, the prior art citations are in fields far removed from the mending of knitted fabrics and particularly sheer nylon hosiery.

It is thought unnecessary to explain in great detail the application of the other prior art citations. Defendant's own expert admitted that it would be absurd to attempt to mend a pulled thread in hosiery on a machine built according to German Patent No. 23,334 of 1883 (an apparatus for smoothing woven fabrics), and that it would be impractical to modify such a machine so that it could do so.

Woodhead Patent No. 2,084,367 relates to apparatus for pre-shrinking cloth and is likewise not anticipatory of the Brown device. Other prior art ranges from auto wheels to rug beaters and simply establish that it is old to fix a hub upon a spindle and superimpose a circular series of self-sustaining work engaging elements. By no stretch of the imagination could any machine built according to any prior patent be modified and adapted to mending pulled threads in a knitted fabric.

Entirely aside from commercial success, which may properly be considered in a close case, defendant has failed to sustain its burden of overcoming the presumption of validity. The Brown patent is valid.

INFRINGEMENT

Infringement is the more difficult problem. In its initial pleading, the defendant admitted that the Miracle machine infringed the Brown patent. Subsequently, it amended its answer to take the position that although the apparatus claims literally described the Miracle machine, it was, nevertheless, not an infringement because the Miracle machine does not perform the same function as the patented apparatus. This position is without merit. Over-simplifying, for the purpose of clarity, the difference between the Brown (Marvel) device and the Miracle device is simply that Miracle substitutes a plurality of radially extended rigid saw teeth for a plurality of radially extended flexible curved needles. Actually, Brown's first embodiment of his invention was a solid disc out of which he cut forks or prongs. He had difficulty with it and went on to the wire wheel type which is referred to throughout this opinion as the Brown (Marvel) device. Brown preferred the wire spokes but worked with a saw tooth disc. In any event, the claims of the Brown patent read on the Miracle saw

tooth device. But defendant urges that the method is different. What defendant means by this is simply that Miracle infringes the Brown (Marvel) *device* but does not infringe the Brown *patent*, or stated differently, that the Brown (Marvel) device does not faithfully embody the Brown patent because the method claim of the Brown patent has been disclaimed leaving no other method described in the Brown patent with respect to the Brown apparatus claims. It is true that none of the machines actually work on the knitted fabric like the Brown method Claim 10, but that claim has been disclaimed, and in any event, is not relevant to the apparatus claims contained in the Brown patent. The function of both plaintiff's Brown (Marvel) machine is precisely the same as that of the Miracle machine, and, indeed, of the Mend-More and Hutchison devices. All are used for the purpose of mending pulled threads, and have no other use or function. The Brown patent adequately describes the apparatus so that it can be made, and teaches how to use it. More (with respect to method) is not required of an apparatus patent. The Miracle machine infringes the apparatus claims of the Brown patent.

Even harder to resolve is the question of infringement by the Mend-More device. Whether to apply the doctrine of equivalents established by *Graver Tank & Manufacturing Co.* v. *Linde Air Products Co.*, 339 U.S. 605, 94 L.Ed. 1097 (1950), depends upon whether the construction of the Mend-More device embodies a major change as compared with the Brown (Marvel) device. *Wabash Corp.* v. *Ross Electric Corp.*, 187 F. 2d 577; *cert. denied*, 342 U.S. 820, 72 S.Ct. 38, 96 L.Ed. 620 (1951). Instead of a plurality of work engaging needles, the Mend-More device employs a single blade mounted eccentrically on a hub. The rotation of the hub is increased some ten times as compared to the

Brown device, thereby getting approximately the same number of strokes or blows per minute against the fabric. The action on the fabric is closely similar, but the stroke is slightly flatter and more closely approximates the Hutchison device movement than does the Brown device. Except for the Hutchison prior art, the *Graver Tank* doctrine of equivalents ought perhaps to be applied to the Mend-More device, but, in view of Hutchison, the broad construction urged by plaintiff for the Brown patent cannot be allowed. To apply the doctrine of equivalents in this case would ignore the teachings of the patent, the representations upon which the claims in suit were allowed, and the representations by which the validity of the Brown patent has been sustained in the prior portion of this opinion. See: *Union Carbide and Carbon Corp.* v. *Graver Tank & Manufacturing Co., Inc., et al,* 196 F. 2d 103; *cert. denied,* 343 U.S. 967, 72 S.Ct. 1059, 96 L.Ed. 1363; *rehearing denied,* 344 U.S. 849, 73 S.Ct. 6, 97 L.Ed. 660 (1952). It would be contrary to the teachings of the Brown patent and its file history to say that a single blade is the equivalent of a series of circular arranged flexible needles. Although function and result are the same, the two devices do not operate in the same way. This is emphasized by Brown's claim of novelty over the Hutchison single needle device: the circular arrangement of plural needles. Brown narrowed his claims in order to get his patent issued over Hutchison. He should not now be permitted to get through the doctrine of equivalents what he could not have obtained initially. "Equivalents in the patent is not the prisoner of a formula and is not an absolute, and things equal to the same thing in this area, may not necessarily be equal to each other." *Graver Tank & Mfg. Co.* v. *Linde Air Products Co., supra.*

The claims of the Brown patent 7, 4, 2 and 1 fail to cover the Mend-More device by the very same point or points of novelty that distinguish the claims over Hutchison. Plaintiff has failed to carry the burden of proving infringement by the Mend-More device.

Collateral Matters

During the trial, counsel stipulated that all questions would be deemed objected to, and that all objections would be deemed waived, unless renewed in writing. Subsequently, both parties renewed their respective objections to evidence concerning the prior art single needle hand device practice.

Both objections are overruled. Nothing is to be gained by rigid adherence to technical rules of evidence in the trial of a case without a jury. See: *United States* v. 25,406 *Acres of Land,* 172 F. 2d 990 (4th Cir. 1949). Although the objections are not without merit, they go more to the weight and importance that the court ought to attach to the testimony than to competence. A few minutes' observation of the mending of hosiery by hand (which opportunity was afforded the court) reduces the problem to smaller dimensions. Hutchison teaches the stroking method of the prior hand manipulated art, and the court bases its findings with respect to this aspect of the prior art upon its own observations and the Hutchison patent. In any event, validity and infringement of the Brown patent do not turn upon the challenged evidence.

The defendant moves the court, pursuant to 35 U.S.C.A. Section 285,[1] to award reasonable attorney fees to the defendant, contending that this is an exceptional case making

[1]The court, in exceptional cases, may award reasonable attorney fees to the prevailing party.

appropriate such an award. But the defendant is not "the prevailing party" except as to non-infringement by the use of the Mend-More device. Even so, the alleged basis for such an award is not deemed to be sufficient. It is true that the plaintiff disclaimed the method claim of the Brown patent at the beginning of the trial, but the court is unable to find from all of the evidence that the late disclaimer was inexcusable or in bad faith. In the opinion of the court, there is no unfairness or other equitable consideration which would make it unjust that defendant bear the burden of its own attorneys fees — even if it be deemed a prevailing party. The court accepts plaintiff's explanation that disclaimer was made within five days after discovery that the method claim was erroneous. A formal disclaimer has been filed in the United States Patent Office. The court concludes that the disclaimer was filed within a reasonable time after knowledge was brought home to the plaintiff that the method Claim 10 was invalid. 35 U.S.C.A. Section 253.

After trial, the defendant Bell moved the court, pursuant to 15(b) of the Federal Rules of Civil Procedure, to amend so as to allege misuse of the patent in that (1) Marvel required users to sign lease agreements forbidding the use of other pulled thread mending machines and (2) that Marvel knew or should have known that Claim 10 of the patent was invalid but did not disclaim it until the trial. The motion to amend is allowed. The allegation with respect to failure to disclaim does not require further consideration.

Misuse of a patent does not invalidate it. 69 C.J.S. *Patents*, Section 155. But courts of equity will withhold relief where the patentee and those claiming under him are using the patent privilege contrary to the public interest. *Mercoid Corp.* v. *Mid-Continent Investment Co.*, 320 U.S.

661, 88 L.Ed. 376, 383 (1944). After the issuance of the patent, only four lease agreements out of hundreds contained the forbidden clause. These were isolated instances and do not support the inference of a plan to unlawfully extend the monopoly of the patent. Moreover, even these lease agreements (and others executed before the issuance of the patent) contained a "favored nations" clause so that subsequently issued leases had the effect of removing the objectionable clause. Misuse is not established. It would not be equity to deny plaintiff relief where it appears that the use of the inserted clause is inadvertent rather than the result of a scheme to unlawfully extend the patent. Plaintiff has not used the patent privilege contrary to the public interest.

Counsel may submit an appropriate judgment.

Judgment Decree

This cause came to be tried before the Court, sitting without jury, and the Court having considered the evidence introduced by the parties, including stipulations, exhibits and entire record in the cause, as well as the briefs of counsel for the respective parties; and the Court having made and filed its Findings of Fact and Conclusions of Law as set forth in the Opinion dated April 29, 1963, which Findings and Conclusions are made a part hereof by reference;

Now, therefore, it is hereby ordered, adjudged and decreed:

1. That Claims 1, 2, 4 and 7 of United States Letters Patent No. 2,570,637, granted October 9, 1951 to Merle M. Brown entitled Method of and Apparatus for Mending

Hosiery are good and valid in law. Claim 10 of the patent is disclaimed;

2. That plaintiff, Marvel Specialty Company, Inc. is possessed of the full and entire right, title and interest in and to said Letters Patent and has been at all times since such patent was issued October 9, 1951;

3. That of Claims 1, 2, 4 and 7 of said Letters Patent No. 2,570,637, asserted by plaintiff herein to have been infringed, defendant, Bell Hosiery Mills, Inc., has infringed each of said Claims 1, 2, 4 and 7 by its use of its first type of hosiery mending machine as shown in plaintiff's Exhibit 4 and referred to during the trial as the "Miracle" or saw tooth machine, and has not infringed any of said Claims 1, 2, 4 and 7 of said patent by its use of its second type of hosiery mending device as shown in plaintiff's Exhibit 3 and referred to during the trial as the "Mend-More" or single needle machine;

4. That defendant, Bell Hosiery Mills, Inc., its officers, agents, servants, employees and attorneys, and those in active concert or participation with them, who receive actual notice of this decree and injunction, be, and they are hereby, enjoined and restrained, during the term of Patent No. 2,570,637, from directly or indirectly making, using or selling, or causing to be made, used or sold, or aiding or abetting in the making, using or selling by others, any hosiery mending machine embodying the invention set forth in Claims 1, 2, 4 and 7 of United States Letters Patent No. 2,570,637, and specifically from directly or indirectly making, using or selling, or causing to be made, used or sold, or aiding or abetting in the making, using or selling by others, any hosiery mending machines conforming in construction to and embodying the features of plaintiff's Exhibit 4 (referred to during the trial as the

"Miracle" or saw tooth machine), and from in any way infringing upon said Claims 1, 2, 4 and 7 of said Letters Patent, or upon the rights of the plaintiff under any of said claims;

5. That plaintiff, Marvel Specialty Company, Inc., have and recover from the defendant, Bell Hosiery Mills, Inc., damages adequate to compensate for the infringement in accordance with the provisions of 35 U.S.C. 284, in an amount as agreed between the parties, or in the event the parties are unable to agree as determined by a properly held accounting;

6. Each party shall bear its own costs.

Entered this 12th day of June, 1963.

United States District Judge for the
Western District of North Carolina